

Office Memorandum • UNITED STATES GOVERNMENT

TO : Assistant for Operations, SI
 AUTH : ~~XXXXXXXXXX~~
 FROM : ~~XXXXXXXXXX~~
 SUBJECT: ~~XXXXXXXXXX~~ "Plastic"

DATE: 3 Oct 52

1. From a perusal of the documents dealing with "Plastic," and discussions on September 9, 1952 with Keeney, ~~XXXXXXXXXX~~, this briefly is the present status:

Thus far, no potent substance or substances have been identified in any of the analyses to which the containers and their contents have been subjected. No psychochemical agent has been found which, upon injection into any part of the body, might, as suspected, "render the victim amenable to guidance of his captor for an indefinite time and might even enable him to walk erect and show no evidence of narcosis." The main reason for this failure is the extreme scarcity of material now left for analysis. Other reasons for the very slow progress are:

- a. the lack of knowledge of natural or synthetic substances or mixtures with the exact psychological and physiological affects upon human behavior indicated.
- b. lack of data of physical characteristics of psychochemical substances for comparison and guidance.
- c. scarcity of microchemical tests for these agents.
- d. general unfamiliarity with microphysiological screening tests.

2. Results of previous examinations are as follows:

a. Plastic Container

According to ~~XXXXXXXXXX~~, the plastic was identified as polymethyl methacrylate, "probably manufactured in Germany, (Rahn and Haas, Darmstadt, W. Germany). It is believed the containers could have been produced from this plastic resin in E. Germany, as well as in the USSR.

b. Collapsible Aluminum Tube

First examination in Army Field laboratory, Germany
 Original volume: 1.5cc. - After centrifuging: 1.1cc.
 Reaction: slightly acid

Tests for Potent Drugs

<u>Narcotics</u>	<u>Hypnotics</u>	<u>Alkaloidal Stimulants</u>	<u>Anesthetics</u>	<u>Analgesics</u>
Morphine - neg.	Barbiturates-neg.	Atropine - neg.	Chloroform-neg.	Salicylates-neg.
Apomorphine "		Strychnine - "	Chloral hydrate	
Cocaine "		Theobromine -"		
Cocaine "		Quinine "		

3. Second examination in ~~the~~ Laboratory and Consultants Laboratory:

Material: 2 droplets of white gelatinous liquid

- Microscopically identified: a. 1-celled vegetable substance
b. Many calcium sulfate crystals (Contamination)

Spectrographically: U. V. analysis eliminated sodium barbital.
Peak shoulder: 250 milli-microns
" " : 250 " (characteristic for scopalamine absent)

4. Third examination in ~~the~~ and Consultant's Laboratory:

Material: 25 micrograms of residue obtained from scrapings and washings of:

- a. Plastic Container
- b. Collapsible Aluminum Tube
- c. Hypodermic needle fragment

Physical Characteristics:

From the residue, ~~one~~ of the Research and Development Division obtained a few crystals by addition of hydrochloric acid. He has determined certain physical characteristics and offered to continue the physical characterization, including density, refractive index and x-ray diffraction pattern, (see attached folder for illustration) and molecular weight determination. Dr. ~~of the~~ Medical School has determined other physical properties of the crystals, including the infrared and ultraviolet absorption spectra. Results indicated that probably scopalamine is absent.

Chemical Characteristics:

The belief has been expressed by Dr. ~~as~~ (as related by Mr. ~~and~~ Mr. ~~that~~) that the crystals are likely of an organic nature and that possibly nitrogen is present. The substance or substances thus may have the character of an alkaloid. No microchemical tests have been made and apparently only few are available.

Microphysiological Characteristics

No tests have been made to determine the physiological or toxicological properties. Dr. [redacted], the Chief of the Analytical Division, has discussed the problem in a preliminary way with Dr. [redacted], head of the Pharmacology department of [redacted], but action was deferred.

5. Fourth examination in [redacted] Laboratory-Consultant's Laboratory:

Material: Hypodermic needle fragment. The outside surface of the needle gave a benmidia test for blood.

The following are the steps already undertaken or planned:

1. Mr. [redacted] promised to collect for transmittal to this agency all written reports and photographic evidence then under preparation by both Messrs. [redacted].
2. Mr. [redacted] offered to collect the remainder of the residue then in the hands of Dr. [redacted] for further tests tentatively decided upon.
3. Mr. [redacted] agreed to complete his tests and compare his findings with those to be obtained in a separate study of any substance submitted to him for that purpose.
4. Messrs. [redacted] offered to consult someone familiar with the microphysical and microchemical characteristics of alkaloids, hoping to thus characterize the material in question.
5. Mr. [redacted] asked for assistance and offered his own in collecting psychochemical substances which alone, or in combination, may be useful guides or key substances for further testing and comparison.
6. A list of potent psychochemical agents is therefore in preparation and includes substances from both natural, (especially Russian orbit sources) and synthetics.
7. Data for the microchemical testing, as well as the microphysiological or microtoxicological testing, (such as using the Daphnia as a micropharmacological test method) are being collected.

(112)

~~_____~~
~~_____~~

8. The literature and other sources are being screened for disclosure or description of substances and mixtures with properties and mechanisms of action which affect human mind behavior and senses, including endurance, consciousness, power of thought and perception, memory, speech, locomotion and individual will power.

~~_____~~
~~_____~~

Encl:

~~_____~~

OSI/~~_____~~ (3 Oct 52)

Distribution:
Orig. & 4 forward
2 - M/SI

-4-

~~_____~~
~~_____~~